No. 638,112. Patented Nov. 28, 1899.

# J. H. GRAHAM.

## BICYCLE.

(Application filed Sept. 13, 1898.)

(No Model.)

FIG. 1.

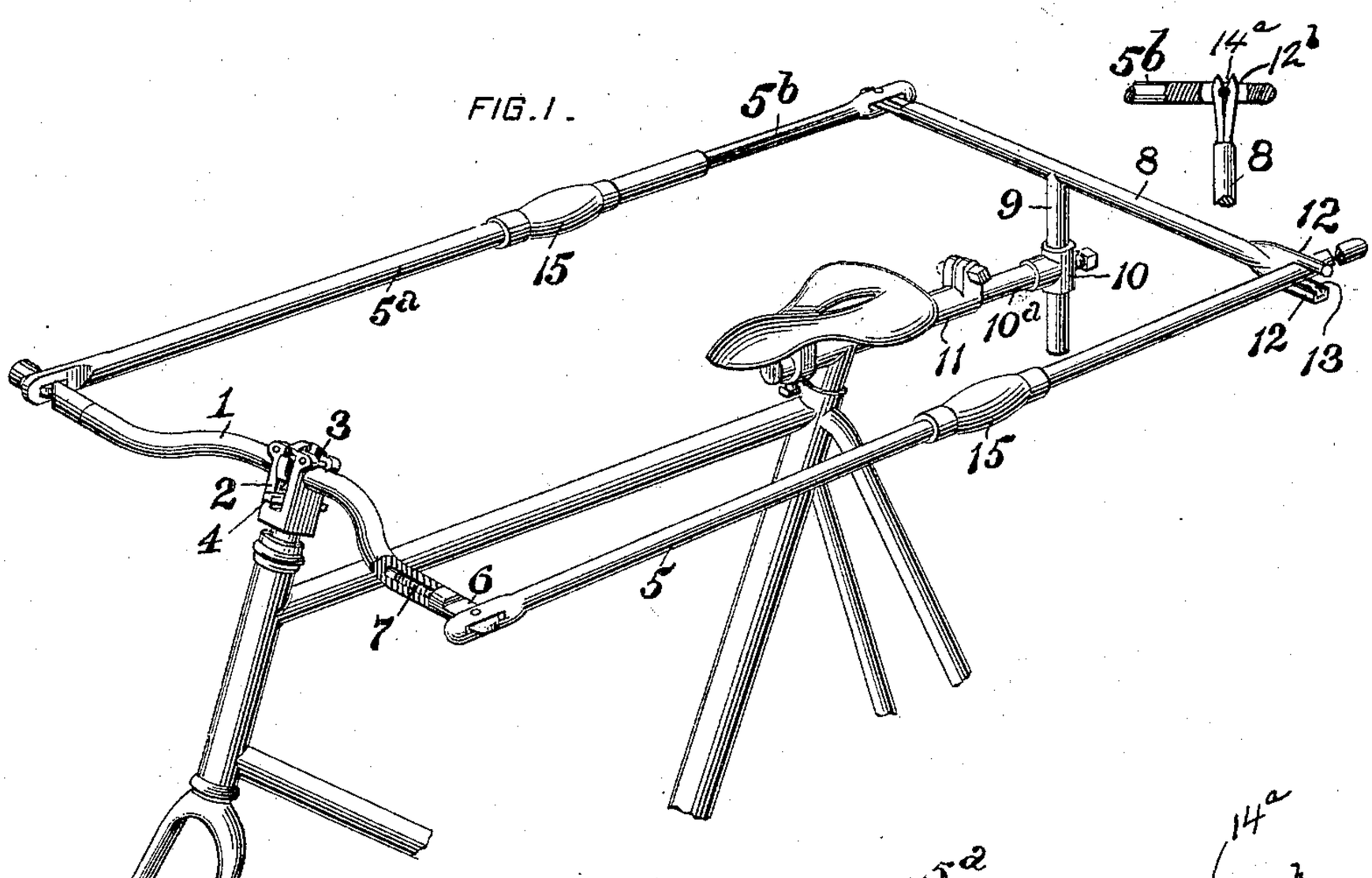



FIG. 2.

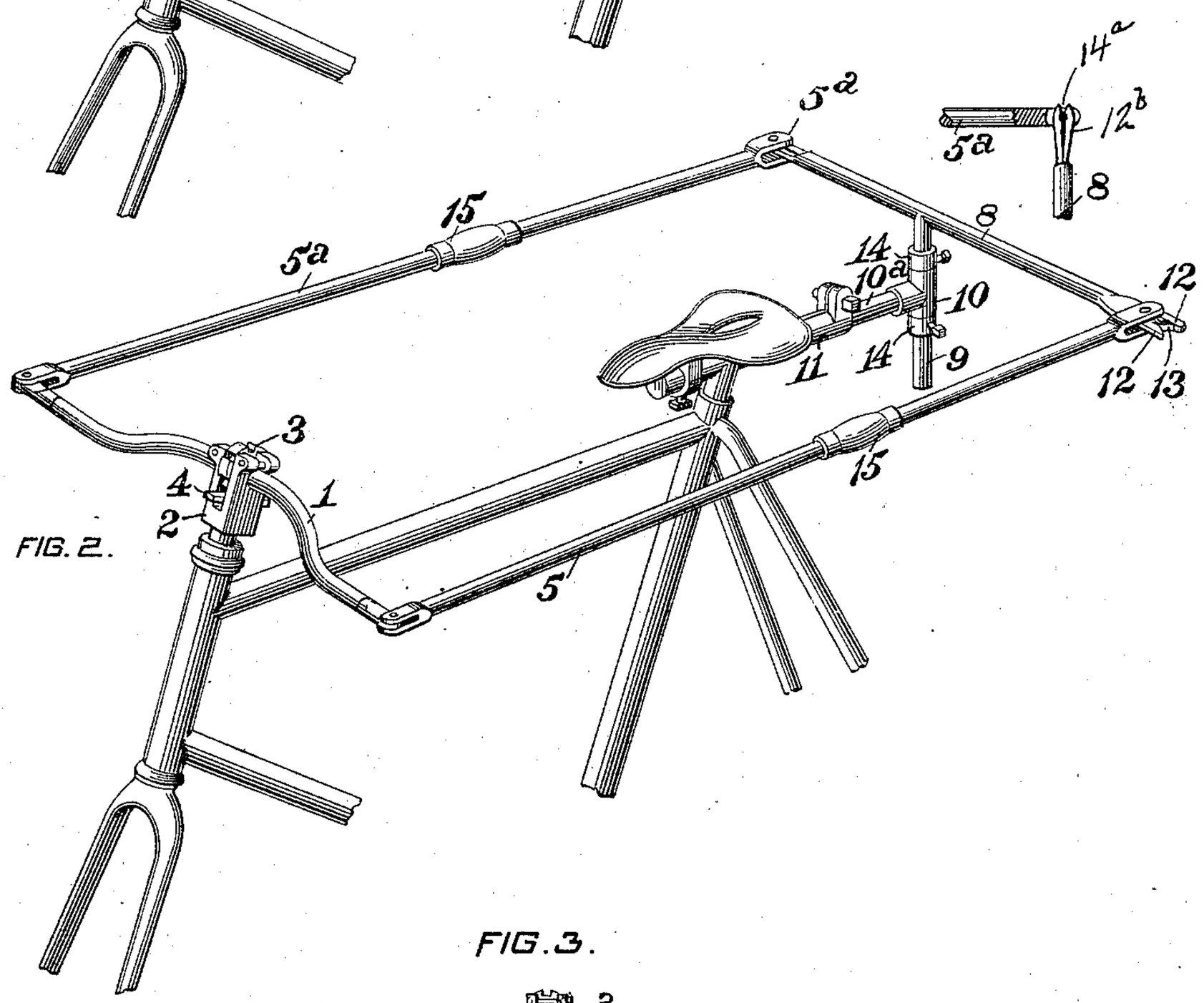
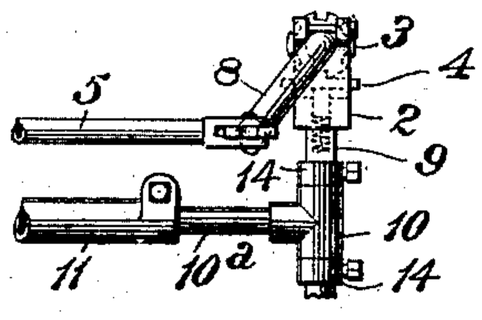



FIG. 3.




WITNESSES:

F. E. Gaither

F. M. Dapper

INVENTOR,

Joseph H. Graham

by Dennis S. Walcott

Att'y.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

# UNITED STATES PATENT OFFICE.

JOSEPH H. GRAHAM, OF ALLEGHENY, PENNSYLVANIA.

## BICYCLE.

SPECIFICATION forming part of Letters Patent No. 638,112, dated November 28, 1899.

Application filed September 13, 1898. Serial No. 690,836. (No model.)

*To all whom it may concern:*

Be it known that I, JOSEPH H. GRAHAM, a citizen of the United States, residing at Allegheny, in the county of Allegheny and State of Pennsylvania, have invented or discovered certain new and useful Improvements in Bicycles, of which improvements the following is a specification.

The invention described herein relates to certain improvements in bicycles, and has for its object the provision of bars connected at the front ends to the steering-head and extending rearwardly to a suitable support behind the saddle, said bars being adapted to serve as handle-bars and permitting the rider to take any desired position on the saddle, and also serving to brace the frame longitudinally.

The invention is hereinafter more fully described and claimed.

In the accompanying drawings, forming a part of this specification, Figure 1 is a perspective view of a portion of a bicycle having my improvements applied thereto. Fig. 2 is a similar view illustrating certain structural modifications, and Fig. 3 illustrates a modified form of the rear cross-bar.

In the practice of my invention the frame of the bicycle may be constructed in accordance with any of the known styles or forms. The cross-bar 1 is secured midway of its length in the steering-head 2, and if curved, as is generally customary, provision is made for its axial rotation in the steering-head by any of the known means in the art. For example, I have shown the bar provided with a ratchet-wheel 3, with which a spring or positively-actuated pawl 4, mounted in the head, will engage. The front ends of side bars 5 and $5^a$ are so connected to the ends of the cross-bar 1 as to permit of the rear ends of the side bars being moved horizontally and vertically, as will be hereinafter described. The cross-bar is connected to the bar 5 by a tongue 6 on the end of the cross-bar projecting through a slot in the bar 5 and a pivot-pin passing through said parts. This tongue 6 is preferably formed on the end of a threaded stem 7, screwing into a threaded axial hole in the cross-bar. This construction permits of the vertical movements of the rear end of the bar 5 and will also permit of the elongation of the cross-bar, so as to afford a wider space between the side bars. The side bars may be connected to the cross-bar, as shown in connection with the bar $5^a$, which is slotted to receive the end of the cross-bar. The sides of the latter are flattened to pass through the slot in the bar $5^a$, and the bar is notched on its upper and lower sides. The bar $5^a$ is held in a vertical position and slid onto the end of the cross-bar until it reaches the notches, which will permit of its being turned down to horizontal position, the side walls of the slot in the bar $5^a$ passing into the notches, thereby locking it with a freedom of pivotal movement on the cross-bar. The rear ends of the side bars are supported by a cross-bar 8, which is provided midway of its length with a post or standard 9. This post is adjustably secured in a socket 10, formed on the end of a stem $10^a$, which projects into a tubular extension projecting rearwardly from the saddle-post 11. The post or standard 9 may be rigidly held in the socket 10, as shown in Fig. 1, or may be so supported therein as to permit of the movement of the cross-bar 8 synchronous with the cross-bar 1. When the cross-bar 8 is held rigid, provision is made for the movements of the steering-head by permitting the side bars to slide back and forth between the fingers 12 on the end of the cross-bar, or the side bar may be formed of two sections, one section, as $5^a$, being tubular for the reception of the section $5^b$, which is adapted to slide back and forth in the tubular section as the steering-head is shifted. Provision can be made for the quick and easy detachment of the bars 5 and $5^a$ from the cross-bar 8 in many ways—as, for example, the bar 5 is held between the fingers 12 by a spring 13, which can be forced aside by outward pressure on the bar, or spring-fingers $12^b$, having their inner faces notched, may be attached to the ends of the cross-bar. These fingers pass through a slot in the ends of the side bars, and a transverse pin $14^a$ passes between the spring-fingers and engages the notches in their inner faces.

In the construction shown in Fig. 2 the post 9 is held in position vertically in the socket 10 by collars 14, adjustably secured on the post above and below the socket, and the cross-bar 8 may be shaped similar to the cross-bar 1, in which case it will be adjustably

mounted on the post 9, so as to permit of its axial adjustment to correspond with the axial adjustment of the bar 1. This construction permits of the movement of the cross-bar 8 with the cross-bar 1, and the ends of the side bars are so connected to the ends of the cross-bar as to permit of their easy detachment therefrom, as hereinbefore described.

The grips 15 as used may be of any desired construction and are adjustably mounted on the side bars, so that they may be shifted in accordance with any desired change in position of the body of the rider.

In mounting the wheel one or both of the side bars are detached from the rear cross-bar 8 and can be swung into engagement with said cross-bar when the rider is seated. In case of an upset the side bars would be disengaged by the side movement of the body of the rider.

The bars may be employed for supporting the bicycle in a vertical position by allowing the rear ends thereof to rest on the ground.

I claim herein as my invention—

1. In a bicycle, the combination of a handle-bar connected to the steering-head, side bars connected to the ends of the handle-bar and extending rearwardly on the opposite sides of the saddle, a support in the rear of the saddle for said bars, and a catch for detachably securing said bars to the rear support, substantially as set forth.

2. In a bicycle, the combination of a handle-bar connected to the steering-head and provided with adjustable end pieces, side bars having a universal connection to the end pieces, a support for the rear ends of the bars arranged in the rear of the saddle and a catch for detachably securing at least one of said bars to the rear support, substantially as set forth.

3. In a bicycle, the combination of a steering-head, extensible bars connected to the steering-head and extending rearwardly on opposite sides of the saddle and having their rear ends detachably connected to a support in the rear of the saddle, whereby the frame is braced or strengthened, and means afforded for steering the wheel in any position of the rider, substantially as set forth.

4. In a bicycle, the combination of a cross-bar adjustably connected to the steering-head, side bars pivotally connected to the cross-bar, a second cross-bar movably mounted in the rear of the saddle and means for detachably connecting the rear ends of the side bars to the second cross-bar, substantially as set forth.

In testimony whereof I have hereunto set my hand.

JOSEPH H. GRAHAM.

Witnesses:

DARWIN S. WOLCOTT,

F. E. GAITHER.